REMARKS/ARGUMENTS

This is in full and timely response to the Office Action mailed January 15, 2003, submitted concurrently with a Petition to Extend Time to within the first extended month. Applicants note that both the July 2, 2002 and the January 15, 2003 Office Actions are identified at the bottom of page 2 as being Paper No. 1. Applicants respectfully request that the next Paper from the Patent Office be correctly identified.

Claim 1 was amended to recite that the pressure sensor is provided on the conduit downstream of the valve, for detecting the pressure in the conduit. Support for this amendment can be variously found throughout the specification, for example, Fig. 1 and the corresponding description. No new matter was added. Claims 1 and 3-6 are pending in this application, with claim 1 being independent. By this Amendment, Applicants believe that at least claims 1 and 3-6 are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,603,315 to Sasso, Jr. Applicants respectfully traverse this rejection.

Claim 1 is directed to an apparatus for supplying an oxygen therapeutic gas and includes a cylinder, a nasal cannula, a conduit, a pressure sensor, a valve and a controller. Claim 1 recites an apparatus for supplying as oxygen therapeutic gas, comprising: a cylinder for containing a pressurized oxygen therapeutic gas; a nasal cannula, adapted to be introduced into a nasal passage of a patient; a conduit extending between the cylinder and the nasal cannula for directing the oxygen therapeutic gas to the nasal cannula from the cylinder; a valve, provided on the conduit, for allowing and blocking the fluid communication between the cylinder and the nasal cannula; a pressure sensor, provided on the conduit downstream of the valve, for detecting the pressure in the conduit; and a controller for controlling the operation of the valve in synchronization with respiration of a patient based on changes in pressure detected by the pressure sensor, the controller comparing respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respiratory frequency is larger than the threshold.

Sasso '315 discloses a multiple mode oxygen delivery system for pulse dosing and conservation of oxygen in a delivery system. The main object of Sasso '315 is to provide an oxygen delivery system improved to continually adjust the oxygen pressure to provide an accurate output despite inaccuracies induced by conventional regulators and pressure changes due to oxygen tank consumption. For this purpose, the pressure sensor 6 is coupled to the line 12 between the pressure regulator 4 and the restrictor 16, that is upstream of the valve 18, so as to detect the output pressure of the gas source 2.

In contrast, the pressure sensor of the present invention is provided on the conduit downstream of the valve so as to detect the changes in the pressure in the conduit representing the breathing cycle of the patient. Accordingly, claim 1 recites a pressure sensor, provided on the conduit downstream of the valve, for detecting the pressure in the conduit.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Sasso '315 fails to disclose, either explicitly or implicitly, teach or suggest at least the above-noted features recited in independent claim 1, Sasso '315 cannot anticipate the claim. At least in view of the foregoing, claim 1 is allowable, and the rejection should be reconsidered and withdrawn.

Dependent claims 3 - 6 depending from claim 1 are also allowable for the reasons above. Moreover, these claims are further distinguished by the materials recited therein, particularly within the claimed combination. Withdrawal of the §102(b) rejection is therefore respectfully solicited.

Rejections under 35 U.S.C. §103

Claim 4 is rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 5,603,315 to Sasso, Jr. in view of U.S. Patent No. 5,865,174 to Kloeppel. Applicants respectfully traverse this rejection.

Kloeppel teaches a supplemental oxygen delivery apparatus that includes a sensing passage, a delivery passage, a valve, a pressure sensor, a controller and a manually actuated switch. The sensing passage is fluidly connectable to a nasal passage of a patient. The delivery passage is fluidly connectable to the nasal passage of the patient. The valve is fluidly connectable to an oxygen supply and fluidly connectable to the delivery passage. The valve

includes a valve inlet and a valve outlet that are not in fluid communication in a first valve condition and are in fluid communication in a second valve condition. The pressure sensor is in fluid communication with the sensing passage and senses a sensed pressure in the sensing passage. The controller operably connected to the pressure sensor and the valve causes the valve to change from the first condition to the second condition responsive to the sensed pressure reaching a threshold level. The manually actuated switch enables the valve to change between the first and second valve conditions or causes the valve to be continuously in the second condition.

As discussed above, claim 1 is directed to an apparatus for supplying an oxygen therapeutic gas and includes a cylinder, a nasal cannula, a conduit, a pressure sensor, a valve and a controller. Claim 1 recites that the controller controls the operation of the valve in synchronization with respiration of a patient based on changes in the pressure detected by the pressure sensor. Claim 1 further recites that the controller compares respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respirator frequency is larger than the threshold.

It is respectfully submitted that the rejection is improper because both Sasso '315 and Kloeppel '174, separately or together, fail to disclose, teach or suggest each element of claim 1. Specifically, Sasso '315 fails to disclose, teach or suggest a pressure sensor provided on the conduit downstream of the valve, for detecting the pressure in the conduit, as discussed above. Kloeppel '174 fails to make up for this deficiency. Still further, the Office Action does not allege that Kloeppel '174 makes up for this deficiency in Sasso '315. .Still further, the applied art fail to teach a controller that compares respiratory frequency with a threshold in order to increase volume of an oxygen therapeutic gas for each respiration in step when the respirator frequency is larger than the threshold. Therefore, it is respectfully submitted that claim 1 is allowable over the applied art.

Dependent claim 4 depending from claim 1 is also allowable for the reasons above. Moreover, this claim is further distinguished by the materials recited therein, particularly within the claimed combination. Withdrawal of the §103(a) rejection is therefore respectfully solicited.

Conclusion

For the foregoing reasons, claims 1 and 3-6 are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of these amendments and remarks is courteously solicited. If the examiner has any comments or suggestions that would place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number below.

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Respectfully submitted,

By 

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Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 180013 for any such fees; and applicant(s) hereby petition for any needed extension of time.